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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,425	11/04/2005	Vito Alanzo	LSP-1011US	3149

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EXAMINER

GILLESPIE, BENJAMIN

ART UNIT	PAPER NUMBER
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1711

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/537,425

Applicant(s)

ALANZO ET AL.

Examiner

Benjamin J. Gillespie

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 6/2/2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. "Vigorous" renders the claim indefinite because it is subjective language.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Morishima et al ('539). Morishima et al disclose a water-dispersible blocked polyisocyanate that contains a non-ionic hydrophilic surfactant (Col 1 lines 9-12; col 2 lines 17-24; and col 8 lines 65-66). The non-ionic hydrophilic surfactant consists of poly(alkylene)ether that is based on ethylene oxide, which is trimethylol propane initiated, has a degree of polymerization between 5 and 50, and is present by at least 70-mol% in the surfactant, which satisfies compound (iii) of claims 1 and 3 (Col 6 lines 33-38, 48-50, 52, 65-67; col 7 lines 1-4).
3. The polyisocyanates consist of hexamethylene diisocyanate (HDI), 2,4-toulene diisocyanate (2,4-TDI), 2,6-toulene diisocyanate (2,6-TDI), as well as trimethylol propane modified isocyanurates wherein the polyisocyanates may be used either singly or as a mixture of two or more species thereof (Col 2 lines 43-50; col 5 lines 1-2, 11, 21-27, 65-67; col 6 lines 1,

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21-26). Finally, the blocking agents disclosed consist of phenols, imidazoles, and oximes (Col 12 lines 27-35).

4. Claims 1-4 and 6-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Reiff et al ('737). Reiff et al teach water-dispersible blocked polyisocyanates comprising the reaction product of polyisocyanates and non-ionic hydrophilic surfactants consisting of polyethylene oxide, which is then blocked with butanone oxime, and useful in coatings (Abstract; col 1 lines 11-25; col 7 lines 57-59; col 8 lines 42-52; col 10 lines 50, 58-59, 65). Specifically, Reiff et al disclose polyisocyanates based on the reaction product of TDI and trimethylol propane, wherein the TDI consists of 2,4 and 2,6 isomers present in a ratio of 80:20 by weight (Col 18 lines 65-67).

5. Solvent consisting of acetone, methyl ethyl ketone, and cyclohexanones, may be present prior and during the blocking of the NCO groups in an amount corresponding to applicants' claimed range (Col 11 lines 20-28, 65-67; and 1-3). The blocking agent is present in a ratio of 1:1 to 1.1:1 based on (blocking agent):(NCO groups), and the resulting solids content of the polyisocyanate dispersion is between 25 and 50-wt% (Col 11 lines 3-8 and 45-50).

6. Additionally, Reiff et al teach that the blocked polyisocyanates may be useful in oil and/or water repellent textile coatings (Col 1 lines 11-15; col 13 lines 19-25). These textile coatings further comprise perfluorinated polymeric compounds, wherein amount of the blocked polyisocyanate is present relative to the perfluorinate compound in an ratio of 12:1 to 1:1, which satisfies claim 15 (Col 13 lines 48-51; col 16 lines 62-64). The blocked polyisocyanates may also be combined at a concentration of 0.5-5-wt% with a impregnating liquor, which is applied to textiles, taken to satisfy claims 16 and 17.

7. Important to note that while Reiff et al teach non-ionic blocked polyisocyanate dispersions corresponding to the claimed method and composition, patentees also include ionic dispersive groups. Nevertheless, claims 1 and 6 are not limited only to non-ionic dispersive groups and therefore Reiff et al anticipates applicants' claimed compositions and method.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morishima et al ('539) in view of Jonderko et al (2002/0061999). Aforementioned, Morishima et al disclose water-dispersible blocked polyisocyanates that contain non-ionic hydrophilic surfactants, wherein the polyisocyanates are used in paint compositions (Col1 lines 9-13). Morishima et al go on to disclose that the blocking agent may consist of butanone oxime, but are silent in teaching 3,5-dimethylpyrazole. Jonderko et al also teach water-dispersible blocked polyisocyanates that contain non-ionic hydrophilic surfactants, wherein the polyisocyanates are used in paint compositions (Paragraphs 2, and 8-11). In particular, Jonderko et al teach that the non-ionic surfactant is ethylene oxide based, and the blocking agents consist of methyl ethyl ketone oxime (butanone oxime) as well as dimethylpyrazole (Claim 14).

9. It would have been obvious to one of ordinary skill in the art at the time of invention to include dimethylpyrazole as a blocking agent in Morishima et al based on the motivation that Jonderko et al teach dimethylpyrazole in analogous non-ionic water dispersible polyisocyanates

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that are useful in paint compositions, and the mere substitution of an equivalent is not an act of invention; where equivalency is known in the prior art, in this case butanone oxime and dimethylpyrazole, the substitution of one equivalent for another is not patentable. *In re Ruff* 118 USPQ 343 (CPA 1958).

10. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reiff et al ('737) in view of Jonderko et al (2002/0061999). Aforementioned, Reiff et al disclose water-dispersible blocked polyisocyanates that contain non-ionic hydrophilic surfactants, wherein the polyisocyanates are used in coating compositions (Col 1 lines 9-13). Patentees go on to disclose that the blocking agent may consist of butanone oxime, but are silent in teaching 3,5-dimethylpyrazole. Jonderko et al also teach water-dispersible blocked polyisocyanates that contain non-ionic hydrophilic surfactants, wherein the polyisocyanates are used in paint compositions (Paragraphs 2, and 8-11). In particular, Jonderko et al teach that the non-ionic surfactant is ethylene oxide based, and the blocking agents consist of methyl ethyl ketone oxime (butanone oxime) as well as dimethylpyrazole (Claim 14).

11. It would have been obvious to one of ordinary skill in the art at the time of invention to include dimethylpyrazole as a blocking agent in Reiff et al based on the motivation that Jonderko et al teach dimethylpyrazole in analogous non-ionic water dispersible polyisocyanates that are useful in coating compositions, and the mere substitution of an equivalent is not an act of invention; where equivalency is known in the prior art, in this case butanone oxime and dimethylpyrazole, the substitution of one equivalent for another is not patentable. *In re Ruff* 118 USPQ 343 (CPA 1958).

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12. Claims 6-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morishima et al ('539). Aforementioned, Morishima et al disclose a water-dispersible blocked polyisocyanate that contains a non-ionic hydrophilic surfactant. Morishima et al go on to teach a method of production by first reacting polyisocyanates with low molecular weight polyols creating isocyanurate compounds, wherein methyl ethyl ketone solvent may be present in an amount that overlaps applicants claimed range. Furthermore, Morishima et al teach that the solvent may continue to be present through the subsequent reactions (Col 3 lines 10-12, col 12 lines 1-2, and 14; col 13 lines 8-12).

13. Next, the isocyanurate compounds are reacted with the non-ionic hydrophilic surfactants at a temperature between 20°C and 150°C, resulting in an NCO content that overlaps applicants' claimed range (Col 11 lines 23-30, 62-67; and col 15 lines 26-30). Finally, the non-ionic water-dispersible polyisocyanates are blocked with methyl ethyl keto oxime, chemically synonymous with butanone oxime, in a ratio of 1:1 to 1:5 (NCO:Blocking Agent) (Col 12 lines 26, 59-61; and col 13 lines 5-8).


14. Although Morishima et al disclose a non-ionic water dispersible blocked polyisocyanate, patentees are silent with respect to the dispersion having a solids content between 25 and 35% by weight. Nevertheless, it would have been obvious to obtain a solids content that corresponds to applicants' claimed range because it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233; *In re Reese*, 129 USPQ 402.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin J. Gillespie whose telephone number is 571-272-2472. The examiner can normally be reached on 8am-5:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

B.Gillespie


RABON SERGENT
PRIMARY EXAMINER